Figure 8

8A

```
1) V2R                   CARGRTPPSLGPQDESCTTASSSLAKDTSS
2) V2R-S362X             CARGRTPPSLGPQDESCTTA
3) V2R-SSSTSS/AAAAAA     CARGRTPPSLGPQDESCTTAAAA LAKDAAA
4) V2R-TSS/AAA           CARGRTPPSLGPQDESCTTASSSLAKDAAA
5) V24-SSS/AAA           CARGRTPPSLGPQDESCTTAAAALAKDTSS
6) β₂AR-V2R-SSS/AAA      CARGRTPPSLGPQDESCTTAAAALAKDTSS
7) β₂AR                  CLRRSSLKAYGNGYSSNGNTGEQSGYHVEQEKENKLLCEDLP-
                         GTEDFVGHQGTVPSDNIDSQGRNCSTNDSLL
8) β₂AR413-V2R10         CLRRSSLKAYGNGYSSNGNTGEQSGYHVEQEKENKLLCEDLP-
                         GTEDFVGHQGTVPSDNIDSQGRNCSTNDSLLSSSLAKDTSS
9) β₂AR360-V2R10         CLRRSSLKAYGNGYSSNGNTSSSLAKDTSS
```

8B

```
V2R     NPWIYASFSSSVSSELRSLLCCARGRTPPSLGPQDESCTTASSS LAKDTSS
AAA-1   ------------------------------  AAA-----------
AAA-2   ------------------------------  ----AAA

NTR-1   NPILYNLVSANFRQVFLSTLACLCPGWRHRKKRPTFSRKPNSMSS NHAFSTSATRETLY
AMAA    ---------------------------------------------  A-AA----------
AAA     ---------------------------------------------  ----AAA-------

OTR     NPWIYMLFTGHLFHELVQRFLCCSASYLKGRRLGETSAS KKSNSSSFVLSHRSSSQRSCSQPSTA
AAAA    ---------------------------------------  AAAA-
AAA-1   ---------------------------------------  ---- AAA-
AAA-2   ---------------------------------------  --------- AAA

SPR     NPIIYCCLNDRFRLGFKHAFRCCPFISAGDYEGLEMKSTRYLQTQGVYKVSRLETTIST VVGAHEEEPEDGPKATPSS LKLTSNCSSRSDSKTMTESFSFSS NVLS
383X    -----------------------------------------  ------X
355X    -----------------------------------------  --------------X
325X    -----------------------X
AAIAA   --------------------------------------  AA-AA-----
APAA    -----------------------------------------  A-AA----
```

Figure 10

10A. Amino acid sequence of the MOR-V2R chimera expressed from the pEArrB-1/MOR vector

MDSSTGPGNTSDCSDPLAQASCSPAPGSWLNLSHVDGNQSDPCGLNRTGLG
GNDSLCPQTGSPSMVTAITIMALYSIVCVVGLFGNFLVMYVIVRYTKMKTA
TNIYIFNLALADALATSTLPFQSVNYLMGTWPFGTILCKIVISIDYYNMFT
SIFTLCTMSVDRYIAVCHPVKALDFRTPRNAKIVNVCNWILSSAIGLPVMF
MATTKYRQGSIDCTLTFSHPTWYWENLLKICVFIFAFIMPILIITVCYGLM
ILRLKSVRMLSGSKEKDRNLRRITRMVLVVVAVFIVCWTPIHIYVIIKALI
TIPETTFQTVSWHFCIALGYTNSCLNPVLYAFLDENFKRCFREFC**AAARGR**
TPPSLGPQDESCTTASSSLAKDTSS
(Seq. ID No. 4)

10B. Amino acid sequence of the D1AR-V2R chimera expressed from the pEArrB-1/D1AR vector

MAPNTSTMDEAGLPAERDFSFRILTACFLSLLILSTLLGNTLVCAAVIRFR
HLRSKVTNFFVISLAVSDLLVAVLVMPWKAVAEIAGFWPFGSFCNIWVAFD
IMCSTASILNLCVISVDRYWAISSPFQYERKMTPKAAFILISVAWTLSVLI
SFIPVQLSWHKAKPTWPLDGNFTSLEDTEDDNCDTRLSRTYAISSSLISFY
IPVAIMIVTYTSIYRIAQKQIRRISALERAAVHAKNCQTTAGNGNPVECAQ
SESSFKMSFKRETKVLKTLSVIMGVFVCCWLPFFISNCMVPFCGSEETQPF
CIDSITFDVFVWFGWANSSLNPIIYAFNADFQKAFSTLLGCYRLC**AAARGR**
TPPSLGPQDESCTTASSSLAKDTSS
(Seq. ID No. 5)

Figure 10, pg. 2

10C. Amino acid sequence of the 5HT1AR-V2R chimera expressed from the pEArrB-1/5HT1AR vector

MDVLSPGQGNNTTSPPAPFETGGNTTGISDVTVSYQVITSLLLGTLIFCAV
LGNACVVAAIALERSLQNVANYLIGSLAVTDLMVSVLVLPMAALYQVLNKW
TLGQVTCDLFIALDVLCCTSSILHLCAIALDRYWAITDPIDYVNKRTPRRA
AALISLTWLIGFLISIPPMLGWRTPEDRSDPDACTISKDHGYTIYSTFGAF
YIPLLLMLVLYGRIFRAARFRIRKTVKKVEKTGADTRHGASPAPQPKKSVN
GESGSRNWRLGVESKAGGALCANGAVRQGDDGAALEVIEVHRVGNSKEHLP
LPSEAGPTPCAPASFERKNERNAEAKRKMALARERKTVKTLGIIMGTFILC
WLPFFIVALVLPFCESSCHMPTLLGAI
INWLGYSNSLL<u>NPVIYA</u>YFNKDFQNAFKKIIKCNF**CAAARGRTPPSLGPQD
ESCTTASSSLAKDTSS**
(Seq. ID No. 6)

10D. Amino acid sequence of the β3AR-V2R chimera expressed from the pEArrB-1/β3AR vector

MAPWPHENSSLAPWPDLPTLAPNTANTSGLPGVPWEAALAGALLALAVLAT
VGGNLLVIVAIAWTPRLQTMTNVFVTSLAAADLVMGLLVVPPAATLALTGH
WPLGATGCELWTSVDVLCVTASIETLCALAVDRYLAVTNPLRYGALVTKRC
ARTAVVLVWVVSAAVSFAPIMSQWWRVGADAEAQRCHSNPRCCAFASNMPY
VLLSSSVSFYLPLLVMLFVYARVFVVATRQLRLLRGELGRFPPEESPPAPS
RSLAPAPVGTCAPPEGVPACGRRPARLLPLREHRALCTLGLIMGTFTLCWL
PFFLANVLRALGGPSLVPGPAFLALNWLGYANSA<u>FNPLIY</u>CRSPDFRSAFR
RLLCRC**AAARGRTPPSLGPQDESCTTASSSLAKDTSS**
(Seq. ID No. 7)

10E. Amino acid sequence of the Edg1R-V2R chimera expressed from the pEArrB-1/Edg1R vector

MGPTSVPLVKAHRSSVSDYVNYDIIVRHYNYTGKLNISADKENSIKLTSVV
FILICCFIILENIFVLLTIWKTKKFHRPMYYFIGNLALSDLLAGVAYTANL
LLSGATTYKLTPAQWFLREGSMFVALSASVFSLLAIAIERYITMLKMKLHN
GSNNFRLFLLISACWVISLILGGLPIMGWNCISALSSCSTVLPLYHKHYIL
FCTTVFTLLLLSIVILYCRIYSLVRTRSRRLTFRKNISKASRSSEKSLALL
KTVIIVLSVFIACWAPLFILLLLDVGCKVKTCDILFRAEYFLVLAVLNSGT
<u>NPIIY</u>TLTNKEMRRAFIRIMSCCKC**AAARGRTPPSLGPQDESCTTASSSLA
KDTSS**
(Seq. ID No. 8)

Figure 11

11A. Nucleotide sequence of the β2AR-V2R chimera

atggggcaacccgggaacggcagcgccttcttgctggcacccaatagaagccatgcgccggacc
acgacgtcacgcagcaaagggacgaggtgtgggtggtgggcatgggcatcgtcatgtctctcat
cgtcctggccatcgtgtttggcaatgtgctggtcatcacagccattgccaagttcgagcgtctg
cagacggtcaccaactacttcatcacttcactggcctgtgctgatctggtcatgggcctggcag
tggtgccctttggggccgcccatattcttatgaaaatgtggacttttggcaacttctggtgcga
gttttggacttccattgatgtgctgtgcgtcacggccagcattgagaccctgtgcgtgatcgca
gtggatcgctactttgccattacttcacctttcaagtaccagagcctgctgaccaagaataagg
cccgggtgatcattctgatggtgtggattgtgtcaggccttacctccttcttgcccattcagat
gcactggtaccgggccacccaccaggaagccatcaactgctatgccaatgagacctgctgtgac
ttcttcacgaaccaagcctatgccattgcctcttccatcgtgtccttctacgttcccctggtga
tcatggtcttcgtctactccagggtctttcaggaggccaaaaggcagctccagaagattgacaa
atctgagggccgcttccatgtccagaaccttagccaggtggagcaggatgggcggacggggcat
ggactccgcagatcttccaagttctgcttgaaggagcacaaagccctcaagacgttaggcatca
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ggataacctcatccgtaaggaagtttacatcctcctaaattggataggctatgtcaattctggt
ttcaatcccctttatctactgccggagcccagatttcaggattgccttccaggagcttctgtgcg
**cccggggacgcacccacccagcctgggtccccaagatgagtcctgcaccaccgccagctcctc
cctggccaaggacacttcatcgtga**
(SEQ ID No. 9)

11B. Nucleotide sequence of the MOR-V2R chimera

atggacagcagcaccggcccagggaacaccagcgactgctcagacccccttagctcaggcaagtt
gctccccagcacctggctcctggctcaacttgtcccacgttgatggcaaccagtccgatccatg
cggtctgaaccgcaccgggcttggcgggaacgacagcctgtgccctcagaccggcagcccttcc
atggtcacagccattaccatcatggccctctactctatcgtgtgtgtagtgggcctcttcggaa
acttcctggtcatgtatgtgattgtaagatacaccaaaatgaagactgccaccaacatctacat
tttcaaccttgctctggcagacgccttagcgaccagtacactgccctttcagagtgtcaactac
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acatgttcaccagcatattcaccctctgcaccatgagcgtggaccgctacattgctgtctgcca
cccagtcaaagccctggatttccgtaccccccgaaatgccaaaatcgtcaacgtctgcaactgg
atcctctcttctgccatcggtctgcctgtaatgttcatggcaaccacaaaatacaggcaggggt
ccatagattgcaccctcacgttctcccacccaacctggtactgggagaacctgctcaaaatctg
tgtctttatcttcgctttcatcatgccgatcctcatcatcactgtgtgttacggcctgatgatc
ttacgactcaagagcgttcgcatgctatcgggctccaaagaaaaggacaggaatctgcgcagga
tcacccggatggtgctggtggtcgtggctgtatttatcgtctgctggacccccatccacatcta
cgtcatcatcaaagcgctgatcacgattccagaaccacatttcagaccgtttcctggcacttc
tgcattgctttgggttacacgaacagctgcctgaatccagttctttacgccttcctggatgaaa
acttcaagcgatgcttcagagagttctgc**gcggccgcacggggacgcacccacccagcctggg
tccccaagatgagtcctgcaccaccgccagctcctccctggccaaggacacttcatcgtga**
(SEQ ID No. 10)

11C. Nucleotide sequence of the D1AR-V2R chimera

atggctcctaacacttctaccatggatgaggccgggctgccagcggagagggatttctcctttc
gcatcctcacggcctgtttcctgtcactgctcatcctgtccactctcctgggcaataccettgt
ctgtgcggccgtcatccggtttcgacacctgaggtccaaggtgaccaacttctttgtcatctct
ttagctgtgtcagatctcttggtggctgtcctggtcatgccctggaaagctgtggccgagattg
ctggcttttggcccttttgggtccttttgtaacatctgggtagcctttgacatcatgtgctctac
ggcgtccattctgaacctctgcgtgatcagcgtggacaggtactgggctatctccagcccttc
cagtatgagaggaagatgacccccaaagcagccttcatcctgattagcgtagcatggactctgt
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gggcgaattcttccctgaaccccattatttatgcttttaatgctgacttccagaaggcgttctc
aaccctcttaggatgctacagactctgc**gcggccgcacggggacgcacccacccagcctgggt
ccccaagatgagtcctgcaccaccgccagctcctccctggccaaggacacttcatcgtga**
(SEQ ID No. 11)

11D. Nucleotide sequence of the 5HT1AR-V2R chimera

atggatgtgctcagccctggtcagggcaacaacaccacatcaccaccggctcccttttgagaccg
gcggcaacactactggtatctccgacgtgaccgtcagctaccaagtgatcacctctctgctgct
gggcacgctcatcttctgcgcggtgctgggcaatgcgtgcgtggtggctgccatcgccttggag
cgctccctgcagaacgtggccaattatcttattggctctttggcggtcaccgacctcatggtgt
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catgctgggctggcgcacccggaagaccgctcggaccccgacgcatgcaccattagcaaggat
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gaccggagcggacacccgccatggagcatctcccgccccgcagcccaagaagagtgtgaatgga
gagtcggggagcaggaactggaggctgggcgtggagagcaaggctggggtgctctgtgcgcca
atggcgcggtgaggcaaggtgacgatggcgccgccctggaggtgatcgaggtgcaccgagtggg
caactccaaagagcacttgcctctgcccagcgaggctggtcctacccttgtgcccccgcctct
ttcgagaggaaaaatgagcgcaacgccgaggcgaagcgcaagatggccctggcccgagagagga
agacagtgaagacgctgggcatcatcatgggcaccttcatcctctgctggctgcccttcttcat
cgtggctcttgttctgcccttctgcgagagcagctgccacatgcccaccctgttgggcgccata
atcaattggctgggctactccaactctctgcttaacccgtcatttacgcatacttcaacaagg
actttcaaaacgcgtttaagaagatcattaagtgtaacttctgc**gcggccgcacggggacgcac
cccacccagcctgggtccccaagatgagtcctgcaccaccgccagctcctccctggccaaggac
acttcatcgtga**
(SEQ ID No. 12)

11E. Nucleotide sequence of the c3AR-V2R chimera

atggctccgtggcctcacgagaacagctctcttgccccatggccggacctccccaccctggcgc
ccaataccgccaacaccagtgggctgccaggggttccgtgggaggcggccctagccggggccct
gctggcgctggcggtgctggccaccgtgggaggcaacctgctggtcatcgtggccatcgcctgg
actccgagactccagaccatgaccaacgtgttcgtgacttcgctggccgcagccgacctggtga
tgggactcctggtggtgccgccggcggccaccttggcgctgactggccactggccgttgggcgc
cactggctgcgagctgtggacctcggtggacgtgctgtgtgtgaccgccagcatcgaaaccctg
tgcgccctggccgtggaccgctacctggctgtgaccaacccgctgcgttacggcgcactggtca
ccaagcgctgcgcccggacagctgtggtcctggtgtgggtcgtgtcggccgcggtgtcgtttgc
gcccatcatgagccagtggtggcgcgtagggggccgacgccgaggcgcagcgctgccactccaac
ccgcgctgctgtgccttcgcctccaacatgccctacgtgctgctgtcctcctccgtctccttct
accttcctcttctcgtgatgctcttcgtctacgcgcgggttttcgtggtggctacgcgccagct
gcgcttgctgcgcggggagctgggccgctttccgcccgaggagtctccgccggcgccgtcgcgc
tctctggccccggccccggtggggacgtgcgctccgcccgaaggggtgcccgcctgcggccggc
ggcccgcgcgcctcctgcctctccgggaacaccgggccctgtgcaccttgggtctcatcatggg
caccttcactctctgctggttgcccttctttctggccaacgtgctgcgcgccctggggggcccc
tctctagtcccgggcccggctttccttgccctgaactggctaggttatgccaattctgccttca
acccgctcatctactgccgcagcccggactttcgcagcgccttccgccgtcttctgtgccgctg
**cgcggccgcacggggacgcacccacccagcctgggtccccaagatgagtcctgcaccaccgcca
gctcctccctggccaaggacacttcatcgtga**
(SEQ ID No. 13)

11F. Nucleotide sequence of the Edg1-V2R chimera

atggggcccaccagcgtcccgctggtcaaggcccaccgcagctcggtctctgactacgtcaact
atgatatcatcgtccggcattacaactacacgggaaagctgaatatcagcgcggacaaggagaa
cagcattaaactgacctcggtggtgttcattctcatctgctgctttatcatcctggagaacatc
tttgtcttgctgaccatttggaaaaccaagaaattccaccgacccatgtactattttattggca
atctggccctctcagacctgttggcaggagtagcctacacagctaacctgctcttgtctgggc
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tcagcctccgtgttcagtctcctcgccatcgccattgagcgctatatcacaatgctgaaaatga
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cctcatcctgggtggcctgcctatcatgggctggaactgcatcagtgcgctgtccagctgctcc
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agctgtgctcaactccggcaccaacccatcatttacactctgaccaacaaggagatgcgtcgg
gccttcatccggatcatgtcctgctgcaagtgc**gcggccgcacggggacgcacccacccagcc
tgggtccccaagatgagtcctgcaccaccgccagctcctccctggccaaggacacttcatcgtg
a**
(SEQ ID No. 14)